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ABSTRACT

This report contains selected preliminary findings from the Longitudinal Study of the Vocational Rehabilitation (VR) Service Program. The study, initiated in fall 1992, will produce a series of interim reports that address key policy questions. This third interim report presents data collected from VR consumers and their VR case files in 37 local VR offices in 30 different states. Findings indicate that in comparison with former consumers who obtained a noncompetitive employment outcome, persons whose outcome was a competitive job more often had disability classified as nonsevere. They were comparatively more often orthopedically or hearing impaired and less often had a vision impairment or mental retardation. Persons who achieved competitive employment were more often male, younger, and had substantially higher reading and mathematics achievement levels. In terms of services, persons who achieved a competitive outcome received slightly more services during VR and more often received educational training and guidance, counseling, and placement services. Persons who obtained a competitive job through VR services worked an average of 35 hours per week and earned $7.35 per hour. One year after completing VR services, a high proportion of consumers who had achieved a competitive job through VR were still working. (CR)

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Third Interim Report:

Characteristics and Outcomes of Former VR Consumers with an Employment Outcome

August 1998

Submitted by
Research Triangle Institute

Submitted to
Rehabilitation Services Administration
U.S. Department of Education

in partial fulfillment of requirements under
ED Contract No. HR92-022-001

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Becky J. Hayward, Project Director

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CHAPTER 1: INTRODUCTION

Initiated in fall 1992, the Longitudinal Study of the Vocational Rehabilitation (VR) Services Program will address key questions of interest to Congress, the Rehabilitation Services Administration (RSA), state VR agencies, and consumers about the performance of the state-federal VR program. The study's design, reflecting the typical service patterns of VR program participants, calls for repeated contacts with individuals over a three-year period to obtain comprehensive information to support judgments about the benefits to consumers and to society of the VR system as it currently operates.

Because of the longitudinal nature of the study, RSA in designing it called for a number of interim reports that would, in an incremental fashion, begin making study findings available to policy makers and practitioners as the study proceeded over a six-year period. This report is the third of four interim reports that, along with the study's final report, will answer the study's questions about the program's impacts on participants. To orient readers to the study, this chapter of the report provides an overview of the study's information goals and reporting schedule, data collection design and activities, and current status.

This report contains selected preliminary findings on the characteristics and outcomes of VR consumers who achieved an employment outcome as a result of VR services. While these findings are preliminary and may change somewhat following completion of the study's data collection activities in fall 1999, they are generalizable to the population of individuals with disabilities who received VR services and achieved a competitive or other type of employment outcome. To begin to address questions regarding the benefits of VR services to consumers, we have focused the analyses for this report primarily on persons who achieved competitive employment. We also report information on characteristics and experiences of persons whose employment outcome was not competitive, when such comparisons help to shed light on factors that may be associated with different types of outcomes.

The remainder of the report contains the following chapters. Chapter 2 includes a profile of former VR consumers who achieved an employment outcome: topics include (1) disability and demographic characteristics, (2) history of labor force participation, and (3) an overview of services received under an Individualized Written Rehabilitation Program (IWRP). Chapter 3

presents findings on the employment and earnings of persons who achieved competitive employment at closure from VR and at one-year follow up. It includes the following sections: (1) type of job, hours worked, and hourly earnings for job at closure; (2) descriptive information on earnings by various characteristics (e.g., severity of disability, educational attainment and achievement levels); and (3) employment and earnings status of these persons one year after exit from VR services.

The findings contained in these chapters come from three primary sources. First is information abstracted from VR case files. Second is a detailed work history interview administered to all study participants at the time of their entry into the study. The third is a follow-up interview administered one year after the participant's exit from VR services. The interview collects information on current employment and earnings status, including changes since exit from VR, receipt of services or benefits, and community integration.

Remaining sections of this chapter review the longitudinal study's reporting schedule, data collection design, and current status, for the convenience of readers who may be unfamiliar with the study's activities.

The Study's Information Goals and Reporting Schedule

Commissioned by RSA and mandated by the Congress in the 1992 Rehabilitation Act Amendments, the VR longitudinal study has been designed to answer the following questions:

- What short- and long-term economic and noneconomic (e.g., independent living, community integration) outcomes do VR applicants and consumers achieve as a result of their participation in VR?
- What characteristics of individuals with disabilities affect their (1) access to and receipt of VR services and (2) short- and long-term outcomes?
- To what extent does receipt of specific VR services contribute to successful consumer outcomes?
- In what ways and to what extent do local environmental factors influence VR consumers' services and outcomes?

- In what ways and to what extent do the operations, resources, and organizational climate of VR agencies influence consumers' services and outcomes?
- What is the return on the VR program's investment?

Definitive findings that address these study questions will require completion of the study's longitudinal data collection activities, scheduled for fall 1999. Over the study period, the study's design has permitted us to prepare interim findings on topics selected in consultation with RSA officials. The first interim report, completed in October 1995, contained profiles of the local offices and their environments, based primarily on analyses from the 1990 decennial census and a mail survey of each of the 40 local VR offices participating in the study. The second interim report, completed in December 1996, described (1) characteristics of current and former VR consumers; (2) history of labor force participation among VR consumers; and (3) consumers' perspectives of their VR services, service providers, and other aspects of their involvement with the VR program. As noted previously, this third interim report contains descriptive findings on characteristics of persons who achieved an employment outcome, including work history and details of their post-VR employment and earnings status. A subsequent interim report is scheduled for spring 1999, with the final report and public-use data files scheduled for release in late 1999.

Data Collection Design

Collection of information required to address the evaluation's questions, which began in November 1994, is continuing. We are implementing a multistage design that initially involved selection of a random sample of 40 local VR offices (in 32 state agencies located in a total of 30 states) and a sample of 8,500 current and former consumers of VR services. Owing to difficulties in employing and retaining qualified individuals to serve as field data collectors, we have experienced some attrition, and at present, data collection continues in 37 of the original 40 offices selected for study. Figure 1 indicates the states in which the participating offices operate.

Additionally, the original intent was to include a sample of 10,000 consumers, to enter the study over a 12 to 18-month period. The complexity of the data collection design, along with attrition and a variety of logistical changes in local office operations around the country, meant that sample acquisition extended over 24 months, rather than the time originally intended. The period of sample acquisition, which has paralleled a period of numerous changes in VR program operations and activities (resulting from changes in the 1992 Amendments and a variety of other factors), led us to modify the sample design by reducing the total number of target participants while not sacrificing precision necessary to address the study's broad research questions.

In order to assess the longer term outcomes of VR participation, the study is implementing a cohort design that entails random selection of individuals at one of three stages of involvement with VR. We selected 25 percent of the total sample (approximately 2,125 persons) when they were in the application stage; the larger cohort, 50 percent of the sample (4,250 persons), entered the study while they were receiving VR services. The third cohort, 25 percent of the sample (2,125 persons), entered the study at or after VR case closure.

We follow each individual for a total of three years; some will still be receiving VR services at the end of the three-year period, although most will have left VR and be working, receiving other services, or engaging in a variety of other activities. Following baseline data collection, we conduct an annual interview with each study participant, the topics of which depend on the individual's current circumstances in regard to VR services. This design accommodates the average length of stay in VR (nearly two years) while at the same time permitting us to track the post-VR earnings, employment, and community integration of individuals following exit from VR as either "successful" or "unsuccessful" closures.

Figure 1. Location of Offices Participating in the Longitudinal Study

• participating VR offices

Figure 2 summarizes the data collection instruments and administration schedules for the study. As noted, the study's field data collectors are gathering detailed information through baseline and annual interviews with study participants as well as through abstraction of case file information. Additionally, we are obtaining information from local office managers, rehabilitation counselors, and other office staff, along with information from state VR agencies on policies and procedures that affect the delivery and outcomes of services. For active consumers, file data collection occurs quarterly until closure.

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Figure 2. Data Collection Instruments, with Method and Frequency of Administration.

INSTRUMENT	*METHOD*	*FREQUENCY*
Consumer interviews		
Work history	Personal/telephone interview	Baseline
Functional status	Personal/telephone interview	Baseline and case closure
Satisfaction	Personal/telephone interview	Baseline and annually to closure
Annual follow up	Telephone interview	Annually from closure of case file
Consumer records		
Consumer characteristics	Records abstraction	Baseline with quarterly updates
Services	Records abstraction	Baseline and quarterly
Agency instruments		
State policies and procedures form	Mail/self-administered	Baseline with annual updates
Local office manager questionnaire	Mail/self-administered	Baseline with annual updates
Other office staff questionnaire	Mail/self-administered	Baseline and end of data collection
VR counselor questionnaire	Mail/self-administered	Baseline and end of data collection

Current Status of Data Collection

As noted earlier, sample acquisition and baseline data collection, including extensive interviews with study participants and abstraction of detailed information from case files, began in November 1994 and extended through November 1996. By January 1998, approximately two-thirds of these study participants had exited VR services. For these individuals, ongoing data collection comprises annual follow-up interviews for a total of three years. For the one-third of study participants who are still receiving VR services, data collection includes quarterly review of case files to collect information on any changes since the prior update (e.g., change in vocational goal on the IWRP or receipt of an additional service) and an annual interview to obtain the consumer's perspectives of the VR experience. At the end of the overall data

collection period, we will readminister mail surveys of staff working in the participating offices. Additionally, we periodically collect updated information on the offices and on state policies and procedures that may affect program operations. Finally, we are analyzing data from large national data sets on local economic conditions that may affect employment outcomes for consumers in the localities around the country in which VR offices are participating in the study.

CHAPTER 2: CHARACTERISTICS OF CONSUMERS WHO ACHIEVED AN EMPLOYMENT OUTCOME

Findings reported in this and the subsequent chapter are generalizable to all persons nationally who achieved an employment outcome following VR services between approximately January 1995 and January 1998. As noted earlier, for some of the analyses conducted for this report, we present findings separately for individuals whose employment outcome was in a competitive job and for individuals whose employment outcome was not competitive, in order to examine factors that may help to explain differing outcomes among former VR consumers. Among persons with any type of employment outcome, 76 percent obtained competitive employment, while 24 percent obtained an outcome that was not a competitive job. Because data collection is continuing, findings presented in this report are subject to some modification once we have completed all data collection for all study participants. For that reason, we have not attempted in this interim report to examine the causes underlying differing employment outcomes. Rather, we present descriptive analyses that provide a picture of what former consumers have achieved in terms of employment and earnings and can serve as a basis for future analyses of the relationships between VR services and consumer outcomes.

Subsequent sections of this chapter contain descriptive analyses of characteristics of persons with differing employment outcomes, as well as findings from a detailed work history interview that examined prior work history and the employment and earnings status of persons when they applied to VR for services. Some of the findings reported here (e.g., type and severity of disability, educational status) are available through RSA's national reporting system; the longitudinal study also collects these data in order to permit analyses of the population along these dimensions and to explore associations among consumer characteristics, services, and outcomes once the study's data collection ends.

Other data reported in this chapter are not available through RSA's data system; these findings are available for the first time on the population of VR consumers who achieved an employment outcome. Included in this category are descriptions of onset of disability, data on

academic achievement levels, types of services provided, and the nature of VR consumers' labor force participation prior to their entry into the VR system.

Disability and Demographic Characteristics

Table 1 reports disability-related characteristics of former VR consumers who achieved an employment outcome. As shown, the distribution of type of disability among persons whose employment outcome was or was not competitive differed noticeably. In comparison with former consumers whose job at closure was noncompetitive, persons who obtained competitive jobs more often had orthopedic impairments (28 versus 18 percent), hearing impairments (12 versus 5 percent), or learning disabilities (8 versus 2 percent). Persons whose jobs were noncompetitive more often had mental retardation (22 versus 8 percent) or visual impairments (27 versus 4 percent). The latter difference results in part from a relatively large number of homemaker closures among persons with visual impairments.

The two groups also differed somewhat in severity of disability. Persons whose job was noncompetitive more often had a most severe (34 versus 25 percent) or severe (58 versus 51 percent) disability than did persons who obtained a competitive job, almost one-fourth of whom had a nonsevere disability. Noncompetitively employed former consumers were also slightly more likely than others to have a congenital versus acquired disability (33 versus 29 percent).

While the majority of consumers with competitive jobs were male (53 percent), the reverse was true for noncompetitively employed persons, 46 percent of whom were male (Table 2). In terms of age ranges, those with competitive jobs tended to be younger: 78 percent were under 50, compared with 54 percent of those with noncompetitive employment outcomes. Among the latter, nearly one-quarter were beyond normal working age (over 64). The mean age for persons who achieved a competitive outcome was 39.6 years (median of 39), while the mean for the other group was 50.6 years (median of 48.5) The two groups were approximately comparable in terms of race, although persons who obtained competitive jobs were more often Hispanic than were those whose jobs were noncompetitive (12 versus 6 percent).

Table 1. Disability Characteristics of Former VR Consumers Who Achieved an Employment Outcome

Characteristic	Competitive employment outcome	Other employment Outcomes
Type of disability	***Percentage***	***Percentage***
Orthopedic, including amputation	28.3	18.3
Mental illness	17.8	12.9
Nonorthopedic physical	12.5	9.4
Mental retardation	7.8	21.9
Learning disability	8.3	1.8
Hearing impairment	12.7	5.3
Vision impairment	4.2	26.9
Substance abuse	6.0	1.6
Traumatic brain injury	1.4	1.1
All other conditions	1.0	0.8
Total	100.0	100.0
Severity of disability	***Percentage***	***Percentage***
Most severe	25.2	34.2
Severe	51.3	58.3
Nonsevere	23.5	7.5
Missing	0.0	0.0
Total	100.0	100.0
Onset of disability	***Percentage***	***Percentage***
Congenital	29.4	33.0
Acquired	70.6	64.5
Missing	0.0	2.5
Total	100.0	100.0

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

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Table 2. Demographic Characteristics of Former VR Consumers With an Employment Outcome

Characteristic	Competitive employment outcome	Other employment outcomes
Gender	***Percentage***	***Percentage***
Male	53.3	46.0
Female	46.7	54.0
Total	100.0	100.0
Age	***Percentage***	***Percentage***
<=21	2.4	1.5
22 – 29	22.3	17.3
30 – 39	26.8	15.7
40 – 49	26.9	19.8
50 - 59	15.4	14.6
60 – 64	3.9	7.3
>64	2.3	23.8
Total	100.0	100.0
Race/ethnicity	***Percentage***	***Percentage***
White	85.7	89.1
African-American	12.7	9.8
Alaska Native or American Indian	0.8	0.1
Asian or Pacific Islander	0.8	1.0
Total	100.0	100.0
Of Hispanic origin	11.6	5.6
Marital status	***Percentage***	***Percentage***
Married	32.7	30.0
Widowed	2.2	15.3
Divorced	15.2	11.4
Separated	5.9	3.6
Never married	44.0	39.7
Total	100.0	100.0
Number of dependents		
Average	2.0	1.9
Minimum	1.0	1.0
Maximum	8.0	11.0

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

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About 75 percent of both groups had completed high school, and the substantial majority of persons in both groups had a high school diploma or GED as the highest degree obtained (Table 3). Persons with noncompetitive jobs more frequently received special education services in high school (33 versus 23 percent). The most noteworthy difference between the two groups, however, was the difference in reading and mathematics achievement levels. While persons who obtained competitive employment averaged 8.5 grade level achievement in reading (9.0 median), those with a noncompetitive job averaged a 6.9 grade level (5.3 median). In mathematics, the levels were 7.8 (median 7.0) for persons who obtained a competitive job, compared with 6.5 (5.0 median) for those with a noncompetitive employment outcome. (Figure 3 contains a graphic representation of these data.) As we discuss in Chapter 3 of this report, these differences are important in that even among people with competitive jobs, higher achievement levels are associated with higher average hourly earnings.

Labor Force Participation at Entry to VR

Information on labor force status among former VR consumers with an employment outcome comes from a work history interview we administered to all study participants at entry into the study. The interview asks consumers to report the type of occupation, wages earned, hours worked, receipt of employment-related benefits, and level of satisfaction, for each job held in the two years prior to their application for VR services, and for their longest uninterrupted period of employment. General findings from these interviews appeared in the study's second interim report (Hayward and Tashjian, December 1996). For this report, we have analyzed former consumers' general labor force participation -- that is, whether they had ever worked, and if so, how recently. Then, for persons who were working at the time they applied for VR services, we describe their wages and hours worked, as well as the type of job they held at application and the type of occupation they were working in.

Table 3. Educational Characteristics at Application of Former VR Consumers Who Achieved an Employment Outcome

Characteristic	Competitive employment outcome	Other employment outcomes
Highest degree obtained*	***Percentage***	***Percentage***
High school/GED	82.0	85.0
Two-year associate's degree	6.9	4.6
Four-year bachelor's degree	8.4	7.4
Master's degree	2.4	2.9
Doctoral degree	0.3	0.2
Total	100.0	100.1
	Percentage	***Percentage***
Did not complete high school	24.1	24.9
	Percentage	*Percentage*
Received special education services in high school	23.4	32.9
	Mean	***Median***	***Mean***	***Median***
Years of education completed	12.3	12.0	11.8	12.0
	Mean	***Median***	***Mean***	***Median***
Reading achievement level	8.5	9.0	6.9	5.3
Mathematics achievement level	7.8	7.0	6.5	5.0

* Percentages reflect persons who achieved at least a high school diploma or GED. As noted in the table, one-fourth of persons who achieved an employment outcome did not complete high school.

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

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Figure 3. Average Educational Status of Former Consumers With an Employment Outcome

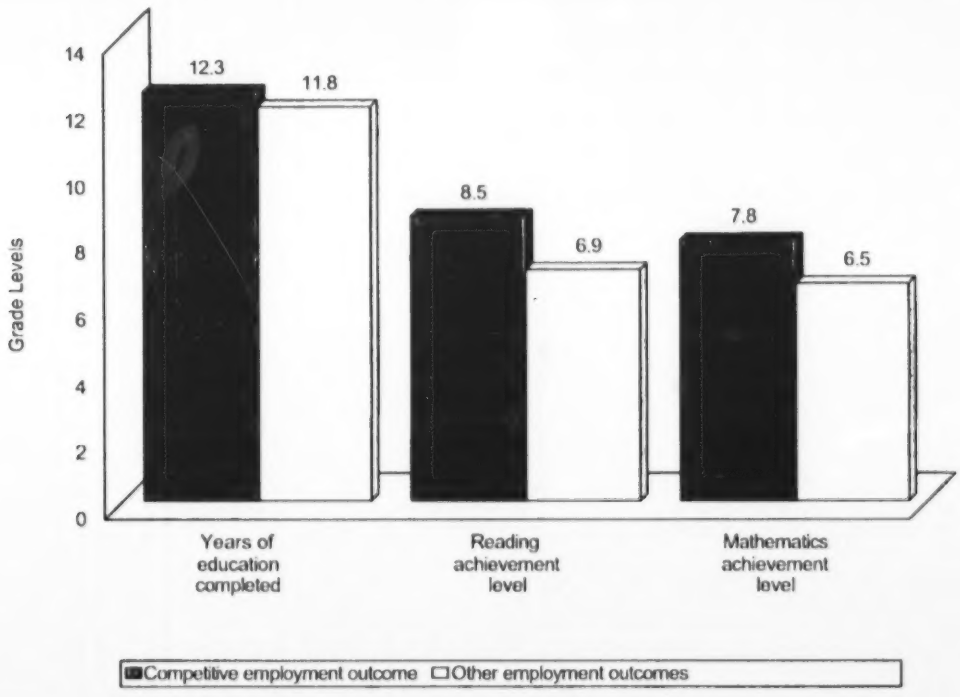

Table 4 (and Figure 4) describes the general work history of former consumers who achieved an employment outcome. As shown, most of these persons had worked at some point in their lives, although proportionally more persons with a noncompetitive outcome had never worked (9 percent, versus 3 percent of persons with a competitive job at closure). Noncompetitively employed former consumers with some work experience were twice as likely not to have worked in the two years prior to their application for VR services (45 percent versus 22 percent) and were considerably more likely to fall in to the category of having worked in the two years prior to application, but not to be working at application (25 versus 38 percent). Finally, while only one-fifth of noncompetitively employed former consumers were working at the time of application, nearly two-fifths, or 37 percent, of those who eventually got a competitive job were working at application.

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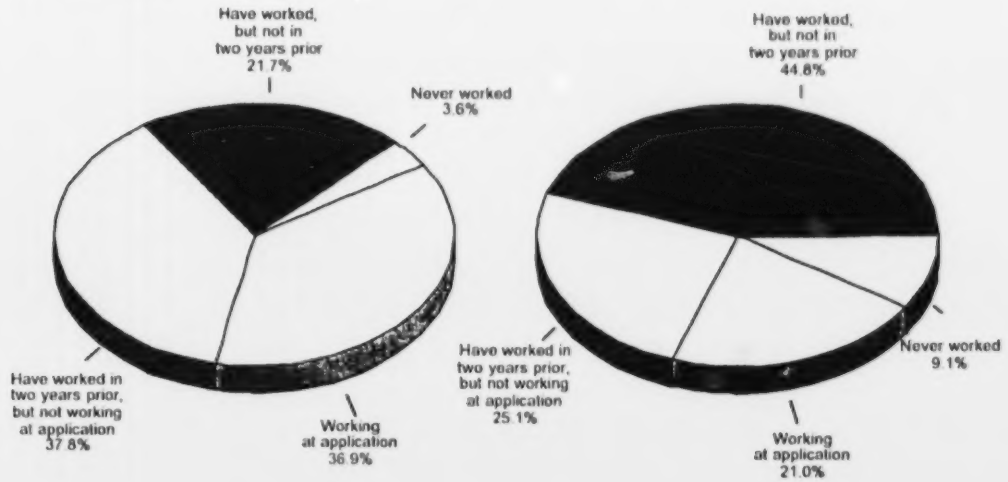
Table 4. Work History of Former VR Consumers Who Achieved an Employment Outcome

Characteristic	Competitive employment Outcome	Other employment outcomes
General work history	***Percentage***	***Percentage***
Never worked for two consecutive weeks	3.6	9.1
Have worked, but not in 2 years prior to application to VR	21.7	44.8
Have worked in two years prior to VR entry, but not working at application to VR	37.8	25.1
Working at application to VR	36.9	21.0
Total	100.0	100.0

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

Figure 4. Work History of Former VR Consumers Who Achieved an Employment Outcome


Have worked, but not in two years prior 21.7%
Never worked 3.6%
Have worked in two years prior, but not working at application 37.8%
Working at application 36.9%
Competitive employment outcomes
Have worked, but not in two years prior 44.8%
Have worked in two years prior, but not working at application 25.1%
Never worked 9.1%
Working at application 21.0%
All other employment outcomes

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In comparison with all who achieved an employment outcome, persons who were working at application more often had disabilities classified as nonsevere (27.4 versus 23.5 percent), more often had received a bachelor's degree (11 versus 8 percent), and on average earned more per hour in their job at closure than did all persons with an employment outcome. They somewhat more often had hearing impairments and less often had orthopedic impairments.

As shown in Table 5, former consumers who were working at application to VR and who obtained a competitive job following VR services were twice as likely to have been working at a competitive job at application as those whose employment outcome was noncompetitive. Ninety-one percent of those working at application who later got a competitive job were working at a competitive job when they applied to VR, compared to 46 percent of those whose later employment outcome was noncompetitive. The employment of these latter persons at application was more often in sheltered work (22 percent versus 2 percent), self-employment (14 versus 4 percent), or supported employment (11 versus 1 percent, respectively). Additionally, their work generally paid less (mean of $5.92 versus $8.14; median of $4.80 versus $6.30), and they worked fewer hours (30.6 versus 33.7 hours per week, on average). Finally, noncompetitively employed former consumers less frequently worked in professional, managerial, or technical jobs (16 versus 22 percent) or in clerical/sales positions (18 versus 25 percent) at application to VR.

Table 5. Characteristics of Job at Application for Former VR Consumers with an Employment Outcome Who Were Working at Application

	Competitive employment outcome	Other employment outcomes
Type of job at application	***Percentage***	***Percentage***
Competitive labor market	90.6	45.7
Sheltered work	2.4	21.6
Self-employment	3.8	14.2
Supported employment	0.9	11.3
Homemaker	0.0	0.9
Unpaid family worker	0.4	0.9
Other	1.9	5.4
Type of occupation at application	***Percentage***	***Percentage***
Professional, managerial, or technical	22.1	15.7
Clerical/sales	25.3	18.1
Service	28.3	25.7
Agricultural, fishery, forestry	2.7	2.6
Processing	1.5	1.3
Machine trades	4.5	1.1
Benchwork	3.8	8.4
Structural work	5.8	3.1
Miscellaneous	6.0	24.0

For persons working at application, hours worked and hourly wages	***Mean***	***Median***	***Mean***	***Median***
Hours worked per week	33.7	40.0	30.6	30.0
Hourly wages	$8.14	$6.30	$5.92	$4.80

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

Overview of Services Received

RSA has traditionally tracked services that VR agencies purchase, provide directly, or arrange through comparable benefits for consumers through the RSA data system. The system aggregates services into the following categories:

- Diagnostic and evaluation services,
- Restoration,
- College/university training,
- Business/vocational training,
- Adjustment training,
- On-job training,
- Miscellaneous training,
- Counseling and guidance,
- Job referral,
- Job placement,
- Transportation,
- Maintenance, and
- Other.

Because one of the key questions of interest to RSA and Congress regarding the operations and effects of the VR program is the relationship between services received and consumer outcomes in terms of employment, earnings, and other benefits, the VR longitudinal study is collecting a great deal of detail on the services provided to consumers. Within the RSA categories noted above, for example, the study collects detailed information on a total of 58 different services. For example, the category "diagnostic and evaluation" comprises 15 different services, including evaluation of: medical status, dental needs, neuropsychological functioning, psychological/psychiatric function, educational status, social adjustment, assistive technology needs, hearing and vision functioning, communication status, orientation/mobility needs, independent living skills, driving skills, and vocational abilities, needs, and goals. Information collected for each of these 58 services includes:

- Source of service (whether provided, purchased, arranged, including name of vendor for purchased services);
- Dates, duration, frequency, and intensity of service;
- Costs of service (costs to VR if purchased, source and amount of comparable benefits, costs of services provided by agency-employed staff);
- For educational services, area of study; and
- Result of service (i.e., what decisions or next steps in the VR process occurred as a result of the service).

Thus, this study provides substantially more detailed information on services, delivery arrangements, and particularly the role that individual services play in the consumer's progress than has been available previously.

Because of the way we have classified these services, our findings regarding average number of services received and proportion of services in each category may not be directly comparable to the data on services available through the RSA-911. For example, each of the study's participants who received VR services will have received IWRP development services, a level of specificity not reflected in the way RSA "counts" services but an important aspect in the development and implementation of service configurations for each consumer and consequently an important component of the study's data collection and analysis activities. In this section we provide a brief overview of the number and types of VR services that former consumers with an employment outcome received; detailed analysis of services received and the effects of those services will be the subject of future reports.

As shown in Table 6, consumers who obtained competitive employment received an average of 9.7 VR services, compared with 9.2 for consumers whose employment outcome was noncompetitive. While the percentage of these services in various categories did not differ greatly, persons with a competitive outcome received slightly more education and training; counseling, guidance, and placement; and transportation, housing, and maintenance services.

Table 6. Services Received by Former VR Consumers With an Employment Outcome

Services	Competitive employment outcome	Other employment outcomes
Number of services received		
Mean	9.7	9.2
Median	8	8
Minimum	1	1
Maximum	161	102
Provider arrangements	***Percentage***	***Percentage***
Purchased	51.6	51.9
Provided by the agency	38.5	37.0
Arranged by the agency	1.6	1.7
Other	8.4	9.5
Total	100.0	100.0
Types of services		
Diagnostic and evaluation	25.3	27.4
Education and training	12.9	10.7
Physical/mental restoration	11.4	16.7
Counseling, guidance, and placement	33.8	28.7
Transportation, housing, and maintenance	12.1	9.7
Other (e.g., licenses, personal assistance)	4.5	6.9
Total	100.0	100.0

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

Persons with a noncompetitive outcome received slightly more diagnostic and evaluation, and physical or mental restoration, services than did their competitively employed peers. Providers of these services did not differ much across the two groups: slightly over half of all services were purchased from vendors, while over one-third were provided directly by agency-employed staff.

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Very few services were delivered under comparable benefits arrangements (only about 2 percent).

Summary

In comparison with former consumers who obtained a noncompetitive employment outcome, persons whose outcome was a competitive job more often had a disability classified as nonsevere and less often had a disability classified as most severe. They were comparatively more often orthopedically or hearing impaired and less often had a vision impairment or mental retardation. Persons who achieved competitive employment were more often male and younger. They had substantially higher reading and mathematics achievement levels. They more often had a work history that included having worked in the two years prior to VR and to be working at application. The jobs they held at application were much more often competitive, and their hourly earnings were considerably higher than those of the persons working at application whose later employment outcome was noncompetitive. Finally, in terms of services, persons who achieved a competitive outcome received slightly more services, on average, during VR and somewhat more often received education and training and guidance, counseling, and placement services than did former consumers whose employment outcome was noncompetitive.

CHAPTER 3: EMPLOYMENT EXPERIENCES OF FORMER CONSUMERS WITH A COMPETITIVE EMPLOYMENT OUTCOME

As noted in the previous chapter, three-fourths of the persons who achieved an employment outcome through receipt of VR services entered competitive employment. Of particular interest to policy makers and practitioners are the benefits to participants of involvement in VR, especially in terms of improvements in employment and earnings status and prospects. In this chapter, we present findings on some of these issues. Included are analyses of the characteristics of competitive jobs that former VR consumers entered following VR services, distribution of earnings levels associated with these jobs by selected consumer characteristics, and employment and earnings status of these former consumers one year after their exit from the VR system. The latter section also presents findings on consumers' relative satisfaction with the jobs they held one year after leaving VR. Because a major focus of the chapter is earnings outcomes, we have limited the analyses to persons who obtained a competitive job as a result of VR services. Later reports will address the post-VR experiences of persons whose employment outcomes did not include a competitive job.

Findings for jobs at closure come from information collected from consumers' VR case files. Findings regarding consumers' employment status one year following their exit from VR come from a follow-up interview that asked detailed questions regarding the person's current earnings and employment status, current receipt of services, and participation in a variety of community-based activities. Future interim and final reports will contain more detailed analyses from the one-year and subsequent follow-up interviews with study participants.

Jobs Obtained Through VR Services

Persons who obtained a competitive job as their employment outcome worked an average of 35 (median of 40) hours per week, with average hourly earnings of $7.35 (median of $6.00). [1] This hourly wage translates into approximately $290 per week (median $240). Comparable figures for the adult education target population [2] are $272 (median $207) and for the adult working population overall are $410 (median $305) (National Adult Literacy Survey, 1992). These findings are consistent with other research (e.g., Hayward and Tashjian, 1996) suggesting that persons with disabilities who achieve a competitive employment outcome earn about the same amount as persons who are members of other groups who receive employment-related services from publicly funded programs; these wages are a little more than two-thirds of the national average.

As noted in Table 7, a substantial proportion of the jobs former consumers obtained were in the lower ranges of average hourly wage: nearly a third were below $5.00 per hour (data collection for most consumers occurred before the minimum wage increased to $5.15 per hour), and another third earned wages ranging from $5.00 to $7.00 per hour. About 20 percent obtained jobs whose wage levels were greater than $9.00 per hour. As the table also shows, jobs at the lower wage levels were less likely than those at higher levels to offer medical benefits to employees: only 13 percent of jobs at less than $5.00 per hour and only 35 percent of those between $5.00 and $7.00 provided such benefits (see also Figure 5). Conversely, 65 percent of those earning more than $11.00 per hour received medical benefits. Overall, 36 percent of jobs obtained by former consumers provided these benefits. (In comparison, Hayward and Tashjian

[1] In general, economists prefer to report earnings as medians, which are less sensitive to outliers whose earnings are very high or very low.

[2] Defined as "persons 16 or older who have not completed high school and are not currently enrolled or required to be enrolled in high school."

Table 7. Characteristics of Job at Closure, for Former VR Consumers Who Obtained a Competitive Job Through VR

Characteristic	Competitive employment outcome	
Wages and hours	***Mean***	***Median***
Hours worked per week	34.9	40.0
Hourly wages	$7.35	$6.00
Range in hourly earnings	***Percentage in each range***	
<= $5.00 per hour	31.5	
$5.00 -$7.00 per hour	31.0	
$7.01 - $9.00 per hour	16.6	
$9.01 - $11.00 per hour	8.8	
$>= $11.01 per hour	12.1	
Total	100.0	
Receipt of medical benefits with job, by wage ranges	Percentage with medical benefits	
<= $5.00 per hour	13.0	
$5.00 -$7.00 per hour	35.0	
$7.01 - $9.00 per hour	52.1	
$9.01 - $11.00 per hour	54.9	
$>= $11.01 per hour	65.0	
All jobs	36.2	
Type of occupation for job at closure	Percentage	
Professional, managerial, technical	23.6	
Clerical/sales	21.8	
Service	23.0	
Agriculture, fishery, forestry	1.2	
Processing	1.2	
Machine trades	4.7	
Benchwork	5.5	
Structural work	2.7	
Miscellaneous	16.4	
Total	100.0	

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

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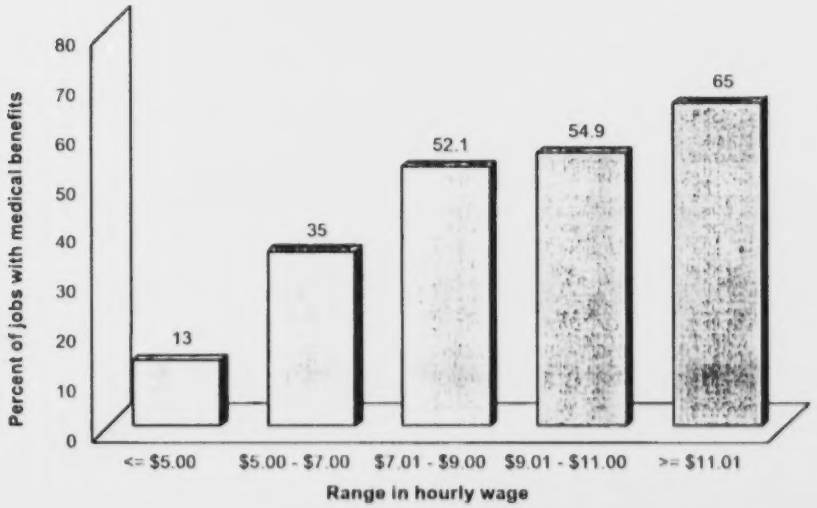
Figure 5. Receipt of Medical Benefits Through the Job, by Ranges in Hourly Earnings



[1996] reported that in 1993, approximately 52 percent of all wage and salary workers in the United States were covered by a group health plan provided by their employer.)

Types of occupations in which consumers obtained jobs included professional, managerial, and technical (24 percent of jobs), service (23 percent), and clerical/sales occupations (22 percent). Very few consumers obtained jobs in processing, structural work, or agriculture.

Table 8 presents the distribution of hourly earnings by selected consumer characteristics, including severity of disability, years of education, and academic achievement levels. Research in disability and other fields has documented the association between these characteristics and hourly earnings. McNeil (1997), for example, reports that persons with severe disabilities earn significantly less than persons whose disabilities are nonsevere. Barton and Jenkins (1995) among others have documented the relationship between educational attainment and achievement and earnings. As shown in the table, competitively employed persons whose disability was

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Table 8. Distribution of Earnings Levels for Job at Closure by Selected Consumer Characteristics, for Former VR Consumers Who Obtained a Competitive Job Through VR

Characteristic	Competitive employment outcome	
Mean and median hourly wage, by severity of disability	***Mean***	***Median***
Most severe	$7.08	$6.00
Severe	$7.31	$6.03
Nonsevere	$7.74	$6.38
Hourly earnings by years of education, for persons with competitive jobs	***Mean***	***Median***
Years of education		
< high school	$6.30	$5.50
high school	$7.05	$6.00
> high school	$9.07	$7.61
Hourly earnings by achievement level, for persons with competitive jobs	***Mean***	***Median***
Reading achievement level		
<= 4th grade	$5.51	$5.00
5th to 8th grade	$6.49	$5.50
9th to 12th grade	$7.24	$6.25
> 12th grade	$7.52	$6.92
Mathematics achievement level		
<= 4th grade	$5.56	$5.00
5th to 8th grade	$6.31	$5.48
9th to 12th grade	$7.48	$6.37
> 12th grade	$8.54	$7.50

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

classified as most severe earned $7.08 per hour (median $6.00), while those whose disability was nonsevere earned an average of $7.74 (median $6.38). Similarly, former consumers with less than a high school diploma (about 25 percent of competitively employed former consumers) earned about $6.30 per hour ($5.50), compared with $9.07 ($7.61) for those with more than a high school education.

Finally, data on reading and mathematics achievement level reflect findings in such other fields as adult literacy and vocational education. As shown in Table 8, persons with less than a fourth grade reading level averaged $5.51 (median $5.00) per hour, while those reading at above twelfth grade averaged two dollars more per hour ($7.52; median $6.92). Comparable figures for mathematics achievement levels were, for those performing at less than fourth grade, $5.56 per hour (median $5.00); for those performing above twelfth grade level, average hourly wage was $8.54 (median $7.50). Given the consistency across disciplines regarding the relationship between earnings and educational levels (see, e.g., Boesel, 1998), policy makers and practitioners may wish to examine strategies for improving the educational status of VR consumers as one mechanism for improving their post-VR economic status.

Retention of Employment and Earnings

As noted earlier, the VR longitudinal study follows study participants for a total of three years. Groups of participants will have reached various stages at the end of that follow-up period. At this point in the study, data are sufficient to support preliminary findings about the retention of earnings and employment among competitively employed former consumers one year after they exited the VR program. However, given the longitudinal nature of the study, these findings, as others, are subject to modification over the next two years as data collection continues and as other study participants enter this group through achieving employment outcomes.

As Table 9 shows, one year after exit from VR services, a total of 85 percent of former consumers who obtained competitive employment were still employed. [3] Sixty-four percent were still working at the job they obtained through VR, while 21 percent had changed jobs but continued to be employed (see also Figure 6). Average hourly wage for persons working one year after VR was $7.94 (median of $6.67), and average hours worked per week were 36 (median of 40). Thus, most persons were working full time, and, as the table shows, 94 percent of them continued in the competitive labor market. An additional 4 percent reported that they were self-employed, an employment arrangement that many persons have increasingly selected in recent years.

[3]In comparison, persons who obtained a job following services in JTPA-funded programs were employed at a much lower rate at 13-week follow up, the follow-up period that the Department of Labor uses to assess retention of employment and earnings. Among this group, 62 percent reported that they were still working 13 weeks after exit from the program (personal communication with U.S. Department of Labor, Employment Training Administration, May 13, 1998).

Table 9. Employment Status at One-Year Follow up, for Former VR Consumers Who Obtained a Competitive Job Through VR

Characteristic	Competitive employment outcome	
Employment status at follow up	***Percentage***	
Still working at job obtained through VR	64.2	
Still working, but at another job	20.8	
Not working, but looking for work	9.9	
Not working, and not looking for work	5.9	
Total	100.8	
Percentage working at one-year follow up	85.0	
Hours worked and hourly wages for job at one-year follow up	***Mean***	***Median***
Hours worked per week	35.7	40.0
Hourly wages	$7.94	$6.67
Type of job for job at one-year follow up	***Percentage***	
Competitive labor market	93.8	
Sheltered work	1.2	
Self-employed	3.8	
Supported employment	1.2	
Total	100.0	

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

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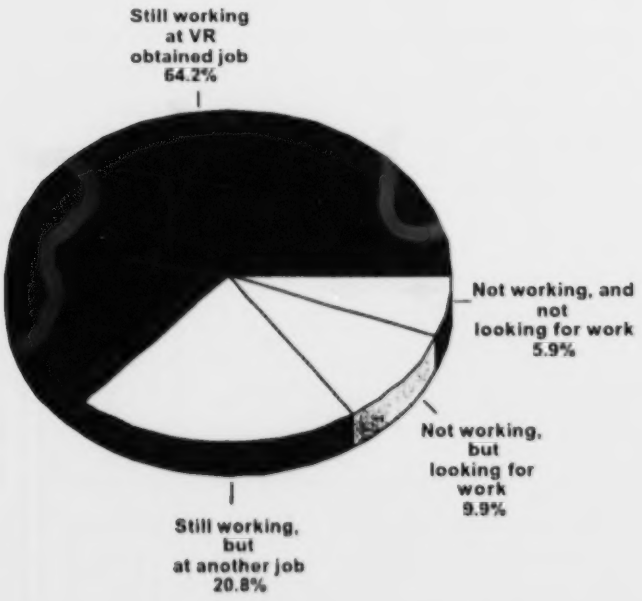
Figure 6. Employment Status One Year After Exit from VR


Still working at VR obtained job 64.2%
Not working, and not looking for work 5.9%
Not working, but looking for work 9.9%
Still working, but at another job 20.8%

The types of occupations in which former consumers with a competitive employment outcome worked at one year after VR had changed somewhat from those at closure (Table 10; see Table 7 for comparison). Nearly one-third (32 percent) were working in a professional, managerial, or technical field, while 22 percent were in service occupations and 20 percent were in clerical/sales positions. According to interviews with these study participants, nearly one-half (48 percent) were receiving medical benefits from their employer, an increase of 12 percent over the jobs they held at closure. Sixty percent reported receipt of vacation leave, and half received sick leave. Other benefits included life insurance (38 percent), retirement plans (34 percent), and dental coverage (33 percent). These findings suggest a general improvement in the employment and earnings status of former consumers with a competitive employment outcome: they were making more money, working more hours, and more frequently receiving health benefits one year after their entry into the competitive labor market than was the case with their initial jobs.

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Table 10. Selected Characteristics of Jobs Held at One-Year Follow up for Consumers Who Obtained a Competitive Job Through VR

Characteristic	Competitive employment outcome
Type of occupation for job at one-year follow up	***Percentage***
Professional, managerial, technical	30.5
Clerical/sales	19.7
Service	21.7
Agriculture, fishery, forestry	1.2
Processing	2.4
Machine trades	3.9
Benchwork	4.6
Structural work	2.1
Miscellaneous	13.9
Total	100.0
Types of benefits provided through job held at one-year follow up	***Percentage with benefit***
Health insurance	48.4
Vacation leave	60.0
Sick leave	49.9
Life insurance	37.9
Retirement/pension plan	34.4
Dental insurance	32.6
Other benefits	15.6

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

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Table 11 provides additional details on type of occupation for the jobs held by former consumers at one-year follow up. The table provides information for three subgroups: persons who retained same job over the period; those who changed jobs between their exit from VR and one year later; and persons who were no longer working one year later. As shown, among persons who changed jobs over the year, many moved into a professional, managerial, or technical position. Within this group, 17 percent held such a job at exit from VR; and one year later, 28 percent held a job of this type, for an 11 percent increase. Persons no longer working one year later, on the other hand, were much more likely to have held a job in a service occupation (30 percent) than in the professional, managerial, or technical category (14 percent). Finally, persons working in the same job at both time periods most often held a job in professional, managerial, or technical occupations (32 percent), followed by service (23 percent), and clerical/sales positions (22 percent).

Finally, we asked these study participants how satisfied they were with the jobs they held at one year after exit from the VR program. As shown in Table 12, consumers were satisfied with their integration in the workplace (defined as "the sense of belonging and extent of involvement you have experienced at work"). A total of 88 percent reported being satisfied (54 percent) or very satisfied (34 percent) with their involvement and sense of belonging. [4] Eighty-four percent were satisfied with their employer's support (defined as "any help your employer gives you to make sure you can stay on the job"): 51 percent reported being satisfied, and 33 percent reported being very satisfied, with this support.

On the other hand, former consumers with a competitive employment outcome were much less often satisfied with their earnings (only about two-thirds were satisfied with this aspect of their job, and only 13 percent were "very satisfied"), fringe benefits (61 percent reported satisfaction, with only 17 percent reporting being "very satisfied") or opportunity for advancement (67 percent, with 16 percent "very satisfied").

[4] A recent study of US workers overall reported similar findings. In that study, 6 in 7 workers (or 86 percent) reported being "very" or "moderately" satisfied with their job, a finding that has remained steady over the past 20 years (Firebaugh and Harley, 1995).

Table 11. Occupational Types of Jobs at Closure and Jobs at One-Year Follow Up for Consumers Who Obtained a Competitive Job Through VR

Characteristic	Competitive employment outcome
Type of occupation of job at closure and at one-year follow up: persons who retained the same job	***Percentage***
Professional, managerial, technical	31.9
Clerical/sales	22.0
Service	22.9
Agriculture, fishery, forestry	0.7
Processing	1.3
Machine trades	3.9
Benchwork	4.4
Structural work	1.5
Miscellaneous	11.4
Total	**100.0**

Type of occupation of job at closure and at one-year follow up: persons who changed jobs between closure and follow up	***Job at closure***	***Job at follow up***
	Percentage	***Percentage***
Professional, managerial, technical	16.5	28.3
Clerical/sales	23.9	16.1
Service	16.2	19.8
Agriculture, fishery, forestry	2.3	1.9
Processing	1.3	4.3
Machine trades	5.7	4.0
Benchwork	6.5	4.7
Structural work	3.8	3.1
Miscellaneous	23.8	17.8
Total	**100.0**	**100.0**

Type of occupation of job at closure for persons who were not working at one-year follow up	***Percentage***
Professional, managerial, technical	14.4
Clerical/sales	19.3
Service	30.0
Agriculture, fishery, forestry	1.7
Processing	1.5
Machine trades	2.7
Benchwork	8.8
Structural work	2.6
Miscellaneous	19.0
Total	**100.0**

Source: VR Longitudinal Study, January 1998
Preliminary findings: data collection is ongoing

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Table 12. Consumers' Satisfaction with Selected Characteristics of Jobs Held at One-Year Follow Up, for Persons Who Obtained a Competitive Job Through VR

Characteristic	Competitive employment outcome		
Selected job characteristics, for job at follow up	*Very satisfied (percent)*	*Satisfied (percent)*	*Not satisfied (percent)*
Earnings	13.3	54.3	32.4
Fringe benefits	17.3	44.2	38.6
Integration in the workplace	34.0	53.7	12.3
Opportunity for advancement	16.4	50.7	32.9
Employer support	33.1	51.3	15.6

Source: VR Longitudinal Study, January 1998

Preliminary findings: data collection is ongoing

Summary

Persons who obtained a competitive job through VR services worked an average of 35 hours per week (essentially full time) and earned $7.35 per hour. Most, however, fell into the lower ranges of earnings: over 60 percent made $7.00 or less per hour, in jobs that were less likely to provide medical benefits, an important issue for many persons with disabilities in terms of their employment decisions. Persons with relatively more education earned higher salaries. For example, persons without a high school diploma/GED earned about $6.30 per hour (median of $5.50), while those with more than a high school education earned an average of $9.07 (median of $7.61). More strikingly, persons with low reading and mathematics achievement levels suffered in terms of hourly wages. Those reading or computing at less than fourth grade level made two or three dollars less per hour than those achieving above the twelfth grade level.

One year after completing VR services, a high proportion of consumers who had achieved a competitive job through VR were still working: fully 85 percent were working, 64 percent in the job they obtained through VR. Their earnings and benefits status had improved over the year. Average hourly wages had increased to $7.94 (median of $6.67), and they worked on average an hour more

per week. Further, nearly half reported receipt of medical benefits (versus 36 percent in their job at closure), along with receipt of other benefits (60 percent received vacation leave and 50 percent received sick leave). Finally, a high proportion were satisfied with their sense of belonging in their workplace (88 percent of consumers) and with the support they received from their employer that facilitated retention of employment (84 percent). Somewhat fewer were satisfied with their earnings, benefits, or opportunity for advancement, although well over half were satisfied with these dimensions of their jobs as well.

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